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BERESKIN AND PARR 40 KING STREET WEST BOX 401 TORONTO, ON M5H 3Y2 CANADA			WASHBURN, DOUGLAS N	
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			2863	

DATE MAILED: 07/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/814,255

Applicant(s)

TUFF ET AL.

Examiner

Douglas N. Washburn

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 June 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-85 is/are pending in the application.
- 4a) Of the above claim(s) 36-39 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-35, 51-61 and 74-85 is/are allowed.
- 6) ☒ Claim(s) 1, 10, 12, 14, 15, 18, 40, 48, 62, 63 and 72 is/are rejected.
- 7) ☒ Claim(s) 2-9, 11, 13, 16, 17, 19, 20, 41-47, 49, 50 and 64-71 and 73 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12 October 2004.
- 4) ☒ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. 1802005.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**  
***Election/Restrictions***

- 1      Restriction to one of the following inventions is required under 35 U.S.C. 121:
- I.      Claims 1-35 and 40-85, drawn to a system for monitoring power usage from a power meter having means for recording the dissipated or developed electrical energy over a continuous interval, for displaying power usage information, classified in class 702, subclass 61.
  - II.     Claims 36-39, drawn to an apparatus for measuring watts, classified in class 324, subclass 142.

The inventions are distinct, each from the other because of the following reasons:

Inventions of Group I and Group II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention of Group I has separate utility such as measuring consumption. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr Orsi on 28 June 2005, a provisional election was made without traverse to prosecute the invention of Group I, claims 1-35 and 40-85. Affirmation of this election must be made by applicant in replying to this Office action. Claims 36-39 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Rejections - 35 USC § 102***

2 The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 10, 12 14, 15, 18, 40, 48, 62, 63 and 72 are rejected under 35 U.S.C. 102(e) as being anticipated by Hunt et al. (US 2003/0193405 A1)(Hereafter referred to as Hunt).

Hunt teaches a detection unit mounted on the power meter unit (power meter 112) for monitoring the power consumption in regard to claims 1 and 40;

A sensor unit (optical sensor 115) disposed adjacent to the power meter (attached to the outside of the meter; column 3, lines 29 and 30) for monitoring the cyclical property of the indication (collects data regarding the power usage of the consumer by sensing motion of a rotating disk; ¶ 0031) and generating a consumption detection signal (signals 126) in regard to claims 1 and 40;

A processing unit (sensor terminal 120) connected to the sensor unit for receiving the consumption detection signal and generating an information signal (signals 126), the processing unit further generating a sensor enable signal to enable the sensor unit for only a portion of the cyclical property of the indication, the portion coinciding with a time interval indicating the completion of one period of the cyclical property, the time interval being shorter than the period of the cyclical property (sensor terminal 120 processes the data signals 330 to generate power usage signals 340 indicative of the power usage data described above and transmit the power usage signals 340 via the radio signals 126 to the display/data collector unit 125 periodically, aperiodically, or upon a polling signal being received by the sensor terminal 120 from the data center 195; ¶ 0039) in regard to claims 1 and 40;

A transmitter (sensor terminal 120) connected to the processing unit for receiving the information signal and transmitting a transmission signal in regard to claim 1;

A display unit (display/data collector unit 125) located remotely with respect to the detection unit (figure 1), the display unit receiving the transmission signal and displaying the power consumption in regard to claim 1;

A display processing unit (display/data collector unit 125) for controlling the operation of the display unit in regard to claim 10;

A receiver (display/data collector unit 125; ¶ 0028) connected to the display processing unit for receiving and processing the transmission signal to provide a received signal to the display processing unit in regard to claim 10;

A display connected to the display processing unit (display/data collector unit 125; ¶ 0028) for displaying information related to power consumption of the structure in regard to claim 10;

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An interface unit connected to the display processing unit (display/data collector unit 125; ¶ 0028) for allowing a user to input information and select modes of operation for the display unit in regard to claim 10;

A communication unit connected to the display processing unit for providing a connection to an external computing device for uploading the power consumption information and downloading power consumption rates (the display/data collector unit 125 may be further coupled to (i) a telecommunications network 170 via an internal communications device attached to a phone line 171 of the consumer, (ii) the Internet 175 via the phone line 171 or other interface line 176 to the internal modem or a serial port of the computer 135, and/or (iii) a wireless communication system 180 via radio signals 181 through a network of base transceiver stations (BTSs) 185a-185n; all three of which being operable to communicate data packets 190 from the display/data collector unit 125 to a data center 195 via communication ports 172, 177, and 182 respectively; ¶ 0028) in regard to claim 12;

A main body for housing the processing unit and the transmitter (figure 1) in regard to claim 14;

An extension member connected to the main body, the extension member having a head region for housing the sensor unit (figures 2A-2D) in regard to claim 14;

An attachment means connected to the main body for mounting the main body on the power meter (figures 2A-2D) in regard to claim 14;

An extension member includes an extension means for extending the location of the head portion for positioning the sensor unit adjacent to a location where the indication appears (figures 2A-2D) in regard to claim 15;

A sensor unit comprises an emitter, a first detector and a second detector, each directed towards a location where the indication appears, the emitter being disposed between the first and second detectors, the emitter being adapted to emit IR energy at the location where the indication appears, and the first and second detectors are adapted to detect a level of IR energy related to the indication, the first and second detectors providing first and second detection signals indicative of the period of the cyclical property of the indication (The optical sensor 115 may use an infrared emitter/phototransistor pair to illuminate and detect a change in light reflected off the rotating disk 230 during or in the absence of the rotation indicator 235 being illuminated by the optical sensor 115; ¶ 0036) in regard to claims 18 and 48;

Sensing a variation of the cyclical property of the indication using a sensor unit and generating a consumption detection signal (sensor terminal 120 processes the data signals 330 to generate power usage signals 340 indicative of the power usage data described above and transmit the power usage signals 340 via the radio signals 126 to the display/data collector unit 125 periodically, aperiodically, or upon a polling signal being received by the sensor terminal 120 from the data center 195; ¶ 0039) in regard to claim 62;

Generating an information signal based on data from the consumption detection signal (sensor terminal 120 processes the data signals 330 to generate power usage signals 340 indicative of the power usage data described above and transmit the power usage signals 340 via the radio signals 126 to the display/data collector unit 125 periodically, aperiodically, or upon a polling signal being received by the sensor terminal 120 from the data center 195; ¶ 0039) in regard to claim 62;

Generating a sensor enable signal to enable the sensor unit for only a portion of the cyclical property of the indication, the portion coinciding with a time interval indicating the completion of one period of the cyclical property, the time interval being shorter than the period of the cyclical property (polling signal being received by the sensor terminal 120 from the data center 195; ¶ 0039) in regard to claim 62;

Transmitting a transmission signal based on the information signal (transmit the power usage signals 340 via the radio signals 126 to the display/data collector unit 125 periodically, aperiodically, or upon a polling signal being received by the sensor terminal 120 from the data center 195; ¶ 0039) in regard to claim 63;

At a remote location relative to the power meter unit receiving and processing the transmission signal for obtaining power consumption information (transmit the power usage signals 340 via the radio signals 126 to the display/data collector unit 125 periodically, aperiodically, or upon a polling signal being received by the sensor terminal 120 from the data center 195; ¶ 0039; figure 1) in regard to claim 63;

At a remote location relative to the power meter unit displaying the power consumption information (generate power usage signals 340 indicative of the power usage data described above and transmit the power usage signals 340 via the radio signals 126 to the display/data collector unit 125 periodically, aperiodically, or upon a polling signal being received by the sensor terminal 120 from the data center 195; ¶ 0039; figure 1) in regard to claim 63;

And providing a connection to an external computing device for uploading the power consumption information and downloading power consumption rates (¶ 0069 and 0070; table 2) in regard to claim 72.



***Allowable Subject Matter***

3 Claims 21-35, 51-61 and 74-85 are allowed.

Claims 2-9, 11, 13, 16, 17, 19, 20, 41-47, 49, 50, 64-71 and 73 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

Claim 2 recites, in part, "generating a sleep period during which the sensor enable signal disables the sensor unit". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 3 recites, in part, "the sleep period is a percentage of the last value of the cyclical property of the indication". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 4 recites, in part, "the sleep period is adjusted based on a history of values for the cyclical property of the indication". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 5 recites, in part, "a prediction unit for generating values for prediction model parameters to predict power consumption data derived from the consumption detection signal, and wherein the values of the prediction model parameters are incorporated into the information signal rather raw data in the consumption detection signal". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 6 recites, in part, "prediction unit updates the values of the prediction model parameters when data generated by the prediction model parameters differs from the power consumption data derived from the consumption detection signal by a value greater than a prediction error value". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 7 recites, in part, "transmitter transmits the transmission signal to the display unit every time new values for the prediction model parameters are calculated". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 8 recites, in part, "a compression unit for compressing data in the information signal". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 9 recites, in part, "a temperature unit for monitoring outdoor temperature and providing a temperature signal to the processing unit, and wherein data from the temperature signal is incorporated into the information signal". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 11 recites, in part, "a buzzer unit connected to the display processing unit for providing audible information to the user". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 13 recites, in part, "an appliance control unit connected to the display processing unit for controlling at least one appliance in the structure, the appliance control unit receiving at least one of temperature information, power consumption information and time information and generating an appliance control signal for controlling an operational setting of the at least one appliance". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 16 recites, in part, "the extension member further includes a pivot means for positioning the extension member at a desired angle with respect to the main body". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 17 recites, in part, "the attachment means includes a clamping means that slidably engages a loop member on the main body, the clamping means extending around the perimeter of the power meter unit". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 19 recites, in part, "the first and second detection signals are combined using the logical AND operator to provide the consumption detection signal". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 20 recites, in part, "the first and second detection signals are combined by subtracting the first and second detection signals from one another". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 21 recites, in part, "a processing unit connected to the sensor unit for receiving the consumption detection signal and generating an information signal, the processing unit including a prediction unit for generating values for prediction model parameters for predicting data in the consumption detection signal and incorporating the values of the prediction model parameters into the information signal". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claims 22-35 depend from claim 21.

Claim 41 recites, in part, "generating a sleep period during which the sensor enable signal disables the sensor unit". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 42 recites, in part, "the sleep period is a percentage of the last value of the cyclical property of the indication". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 43 recites, in part, "the sleep period is adjusted based on a history of values for the cyclical property of the indication". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 44 recites, in part, "a prediction unit for generating values for prediction model parameters to predict power consumption data derived from the consumption detection signal, and wherein the values for the prediction model parameters are used in the information signal rather than raw data in the consumption detection signal". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 45 recites, in part, "the prediction unit updates the values for the prediction model parameters when data generated by the prediction model parameters differs from the power consumption data derived from the consumption detection signal by a value greater than a prediction error value". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 46 recites, in part, "a compression unit for compressing data in the information signal". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 47 recites, in part, "a temperature unit for monitoring outdoor temperature and providing a temperature signal to the processing unit, and wherein the temperature signal is incorporated into the information signal". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 49 recites, in part, "the first and second detection signals are combined using the logical AND operator to provide the consumption detection signal". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 50 recites, in part, "the first and second detection signals are combined by subtracting the first and second detection signals from one another". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 51 recites, in part, "a processing unit connected to the sensor unit for receiving the consumption detection signal and generating an information signal, the processing unit including a prediction unit for generating values for prediction model parameters for predicting power consumption data derived from the consumption detection signal and incorporating the values of the prediction model parameters into the information signal". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claims 52-61 depend from claim 51.

Claim 64 recites, in part, "tracking the cyclical property of the indication for generating a sleep period during which the sensor enable signal disables the sensor unit". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 65 recites, in part, "generating the sleep period as a percentage of the last value of the cyclical property of the indication". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 66 recites, in part, "generating the sleep period based on a history of values for the cyclical property of the indication". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 67 recites, in part, "generating values for prediction model parameters to predict power consumption data derived from the consumption detection signal". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 68 recites, in part, "updating the values for the prediction model parameters when data generated by the prediction model parameters differs from the power consumption data derived from the consumption detection signal by a value greater than a prediction error value". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 69 recites, in part, "compressing data in the information signal to produce the transmission signal". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 70 recites, in part, "monitoring outdoor temperature and incorporating temperature data into the information signal". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 71 recites, in part, "predicting future power consumption of the structure based on the stored information". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 73 recites, in part, "generating an appliance control signal for controlling an operational setting of at least one appliance in the structure, the appliance control signal being generated based on at least one of temperature information, power consumption information and time information". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 74 recites, in part, "generating an information signal based on data from the consumption detection signal by generating values for prediction model parameters to predict power consumption data derived from the consumption detection signal and including the values of the prediction model parameters in the information signal". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claims 75-85 depend from claim 74.

It is these limitations, which are not found, taught or suggested in the prior art of record, and are recited in the claimed combination that makes these claims allowable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

4 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas N. Washburn whose telephone number is (571) 272-2284. The examiner can normally be reached on Monday through Thursday 6:30 AM - 4:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DNW

**BRYAN BUI**  
**PRIMARY EXAMINER**

  
7/5/05